

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 2, 7, 20 and 26 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-27 are pending and under consideration.

ALLOWABLE SUBJECT MATTER:

The Office Action, at page 10, item 9, indicated claims 5 and 8 would be allowable if rewritten in independent form. Claims 9-12, 18, and 19 are allowed. Applicant holds rewriting of these claims in abeyance until the Examiner has had the opportunity to review the arguments presented herein.

REJECTION UNDER 35 U.S.C. §112:

In the Office Action, at page 2, item 20, claim 20 was rejected under 35 U.S.C. §112, first paragraph. The Office Action indicated it is unclear "how a second interface unit outputs the error information provided from the controller in claim 20, and then in claim 21, the controller receives the error information from the hard disk drive via the second interface unit." In response, Applicant has modified claim 20 to recite, at least, "the error information provided from the hard disk drive to the controller in real time." Applicant respectfully requests reconsideration of the rejection.

CLAIM OBJECTIONS:

Claim 20 is being objected to because of the following informalities: in line 6, "provided" should be changed to "provide". In response, Applicant has modified the claim and respectfully requests reconsideration of the objection.

REJECTIONS UNDER 35 U.S.C. §§102 and 103:

In the Office Action, at items 5, 7 and 8 respectively, claims 1-3, 6, 7, 13-16, 20-23, and 25-27 were rejected under 35 U.S.C. §102(e) as being anticipated by Takaichi (US 2003/0149918— hereinafter Takaichi); claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Takaichi; and claims 17 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Takaichi in view of Watanabe (JP 411313278 Abstract – hereinafter

Watanabe). The reasons for the rejections are set forth in the Office Action and are therefore not repeated. Applicant traverses the rejections and respectfully requests reconsideration.

Amended independent claim 1 recites, at least, "...outputting the error information and the state information in real time to the outside..."

Neither Takaichi nor Watanabe, alone or in combination, suggests or discloses the above-identified features of claim 1. Takaichi, at paragraph [119], recites "When the disk memory defect determining part 15 detects the existence of a defective area in the disk memory 4 or performance degradation of the whole disk memory 4, and determines that the disk memory 4 is defective (step S50), the disk memory defect warning part 16 displays the determination that the disk memory 4 is defective and contents of the defect via the display part." Applicant asserts the language cited in the Office Action fails to disclose either the disk memory defect determining part 15 detecting, or the disk memory defect warning part 16 displaying, the presence of a defect and contents of the defect in real time.

In fact, Takaichi teaches away from the present feature as shown in paragraph [0053] which recites "When the end status detection part 7 receives the notification of the data transfer end from the disk memory I/F part 3 in step S5, the end status detection part 7 detects a data transfer error which has occurred between the disk memory I/F part 3 and the disk memory 4, or an error which has occurred in the disk memory 4..." Takaichi suggests in paragraph [0053] that detection of a data transfer error does not occur in real time because the data transfer must first end and notice of the data transfer end must be received before the end status detection part 7 can detect a data transfer error.

Now referring to Watanabe, the Abstract of Watanabe recites "A temperature discrimination circuit 322 that is a warning means, a buzzer 319, an LCD monitor 120 and an external display device 140 are used to raise a warning. That is, when photographing by the camera is started, the temperature discrimination circuit 322 reads a current temperature by a thermometer 218 placed in the vicinity of a recording device (hard disk) 216 and compares the temperature with a value stored in an operating temperature storage circuit 321. When the current temperature exceeds the value stored in the operating temperature storage circuit 321, the buzzer 319, the LCD monitor 120 and the external display device 140 are used to display the warning." Watanabe also fails to suggest or disclose the above-identified features of the present application.

In contrast, claim 1 recites "...outputting the error information and the state information provided by the state information manager in real time..." This feature is supported at paragraph

[0065] of the specification which states, "Since an operation of the serial interface unit 408 and an operation of the IDE interface unit 406 are performed, in parallel, irrespective of the data recording operation of the HDD 400, the error information and the state information are providable to an outside of the HDD 400 in real time."

Accordingly, Applicant respectfully submits that the cited references, alone or in combination, neither disclose nor suggest every element of the claims, arranged as required by the claim 1. Therefore, Applicant respectfully submits that the Office Action has not provided sufficient evidence to maintain a prima facie anticipation rejection or a prima facie obviousness rejection of the claim 1.

Amended independent claim 7 recites "...a second interface unit outputting the error information and the state information provided by the state information manager in real time to the outside when an error occurs."

Independent claim 13 recites "...a second interface unit to output the error information and the state information to the outside in real time."

Independent claim 14 recites "...a second interface unit to output the state information to the outside in real time."

Independent claim 15 recites "...a second interface unit to output the error information in real time."

Amended independent claim 20 recites "...a second interface unit outputting the error information provided from the outside of the hard disk drive to the controller in real time ..."

Independent claim 26 recites "...outputting the error information and the state information in real time to the outside via only the second interface unit."

Independent claim 27 recites "a second interface unit to output the error information in real time."

Applicant further submits that claims 7, 13, 14, 15, 26 and 27, although varying in scope, contain similar features and are therefore patentable over Takaichi and Watanabe for the same rationale discussed with respect to claim 1.

Applicant respectfully submits that independent claims 1, 7, 13, 14, 15, 26 and 27 patentably distinguish over the cited art, and should be allowable for at least the above-mentioned reasons. Further, Applicant respectfully submits that claims 3, 4, 6, 16, 17, and 20-25, which variously depend from independent claims 1, 7, 13, 14, 15, 26 or 27, should be

allowable for at least the same reasons as claims 1, 7, 13, 14, 15, 26 and 27, as well as for the additional features recited therein.

CONCLUSION:

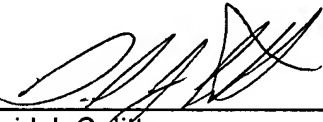
In accordance with the foregoing, Applicant respectfully submits that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the cited art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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